

REQUEST FOR ACCESS TO AN APPLICATION UNDER 37 CFR 1.14(e)

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In re Application of

Application Number

09/339 616

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Art Unit

Examiner

Paper No.

#28

Assistant Commissioner for Patents
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1. ☐ I hereby request access under 37 CFR 1.14(e)(2) to the application file record of the above-identified ABANDONED Application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and is: (CHECK ONE)

☐ (A) referred to in:

United States Patent Application Publication No. 6461019, page _____, line _____.

United States Patent Number _____, column _____, line _____, or

an International Application which was filed on or after November 29, 2000 and which

designates the United States, WIPO Pub. No. _____, page _____, line _____.

☐ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11(b) or

1.14(e)(2)(i), i.e., Application No. _____, paper No. _____, page _____, line _____.

2. ☐ I hereby request access under 37 CFR 1.14(e)(1) to an application in which the applicant has filed an authorization to lay open the complete application to the public.

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US006461019B1

(12) **United States Patent**
Allen

(10) Patent No.: **US 6,461,019 B1**
(45) Date of Patent: **Oct. 8, 2002**

(54) **PREFERRED EMBODIMENT TO LED LIGHT STRING**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

An LED light string employs a plurality of LEDs wired in block series-parallel, where the one or more series blocks, each driven at the same input voltage as the source voltage (110 VAC or 220 VAC), are coupled in parallel. The LED light string interfaces to the source voltage using a common household plug; it may also include a corresponding common, household socket, coupled in electrical parallel, to enable multiple light strings to be connected to each other from end to end. In order to directly drive a network of diodes without current-limiting circuitry, the voltage of each series block of diodes must be matched to the input source voltage. This voltage matching requirement for direct AC drive places fundamental restrictions on the number of diodes on each diode series block, depending on the types of diodes used. For the voltage to be "matched," in each series block, the peak input voltage must be less than or equal to the sum of the maximum diode voltages for each series block.

3 Claims, 12 Drawing Sheets

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/378,631, filed on Aug. 20, 1999, now abandoned, which is a continuation-in-part of application No. 09/339,616, filed on Jun. 24, 1999, which is a continuation-in-part of application No. 09/141,914, filed on Aug. 28, 1999, now Pat. No. 6,072,280.
(60) Provisional application No. 60/119,804, filed on Feb. 12, 1999.

(51) Int. Cl.⁷ F21V 21/00
(52) U.S. Cl. 362/249; 362/226; 362/252; 362/800

(58) Field of Search 362/555, 800, 362/806, 568, 249, 252, 545, 226

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